AQUAZONE™

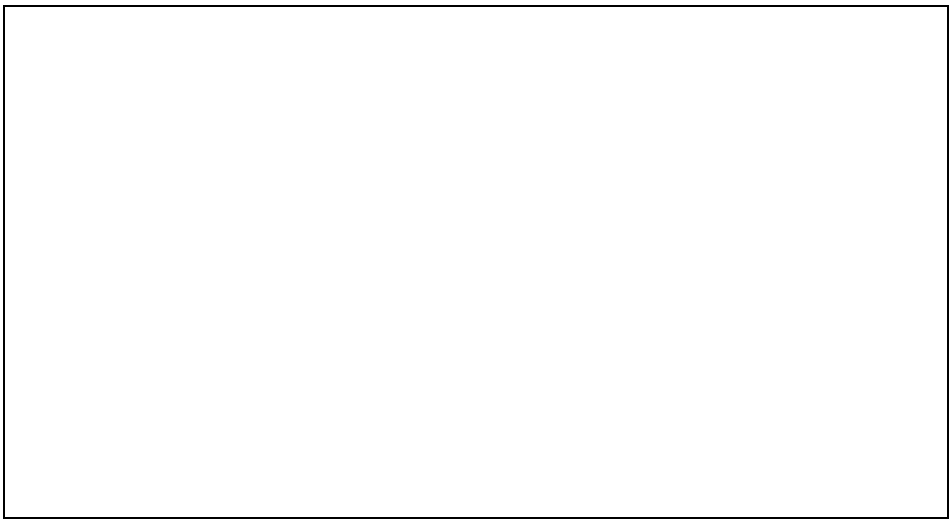
50HQL072,096,120

50VQA,VQD080-300

LARGE CAPACITY WATER SOURCE HEAT PUMPS

— PERFORMANCE DATA

— DIMENSION PRINTS



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Form 50H,V-4SB Replaces: 50H,V-1SB Printed in U.S.A. 402 3-02 Catalog No. 515-00016

Date:	Supersedes:	**50HQL072, 096, 120; 50VQA,VQD080-300 WATER SOURCE HEAT PUMPS**	50HQL 50VQA,VQD	Rev: -4SB
JOB NAME:		LOCATION:		
BUYER:		BUYER P.O.#	CARRIER#	
UNIT NUMBER:		MODEL NUMBER:		
PERFORMANCE DATA CERTIFIED BY:			DATE:	

DESCRIPTION

50HQL072-120 units available in both standard (60 to 95 F) and extended temperature (20 to 110 F) ranges for commercial water loop (boiler/tower), open loop, and ground loop applications.
50VQA080-300 units available for standard temperature water loop applications and 50VQD080-300 units available for extended temperature open loop and ground loop applications.
All commercial horizontal and vertical large capacity water source heat pumps are packaged water-to-air units and are factory wired, piped, tested, and charged with refrigerant R-22 for immediate installation.

STANDARD FEATURES

Three-sided compressor compartment access on horizontal units.

Removable panels provided for access to blower, compressor and control box for all units.

Non-painted galvanized steel construction with $^1/_2$-in. coated acoustic insulation.

FPT water and condensate connections.

High/Low voltage knockouts.

Filter is 1-in. disposable type with side access holding bracket.

Condensate pan is coated with baked-on enamel finish and insulated.

Horizontal units are shipped with heavy gage steel hanger brackets.

Dual independent refrigerant circuits (except HQL072) with thermostatic expansion valve(s) for refrigerant metering.

Copper tubing interconnecting all components.

High and low side Schrader ports.

Dual hermetic and scroll compressors (except HQL072) mounted on springs.

Tube-in-tube copper inner water-to-refrigerant coil.

Air-to-refrigerant coil with lanced aluminum fins.

Four-way solenoid reversing valve activated in cooling mode.

Standard blowers with centrifugal forward curve, statically and dynamically balanced.

Fan motor is open drip-proof type, three phase with thermal overload protection, belt driven.

Complete C microprocessor based controls standard on all units. Features include loss of charge switch, high-pressure switch, water and air coil freeze protection (selectable for water or anti-freeze). Additional features include lockout safety circuit reset at thermostat or disconnect, LED fault indication 5-minute anti-short cycle, random start, high and low voltage protection, condensate overflow protection, dry contact for alarm, accessory relay, water temperature monitoring (performance sentinel), electric heat output, 50 VA transformer.

Internally mounted control box houses control transformer, electronic control board, compressor and reversing valve controls.

PERFORMANCE DATA

UNIT

Operating Weight _____ lbs
Shipping Weight _____ lbs
EER (ARI) _____

COOLING

Total Capacity _____ Btuh
Sensible Capacity _____ Btuh
Unit CFM _____ at _____ in. wg ESP
Total Heat of Rejection _____ Btuh
Entering Air Temperature _____ °F db _____ °F wb
Entering Water Temperature _____ °F
Leaving Water Temperature _____ °F
GPM _____
Water Pressure Drop _____ ft
Unit Power Input _____ kW

HEATING

Total Capacity _____ Btuh
Unit CFM _____ at _____ in. wg ESP
Total Heat of Absorption _____ Btuh
Entering Air Temperature _____ °F
Entering Water Temperature _____ °F
Leaving Water Temperature _____ °F
GPM _____
Water Pressure Drop _____ ft
Unit Power Input _____
COP (ARI) _____

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

ELECTRICAL DATA

Power Supply to Unit _____Volts_____Phase_____Hertz
Compressor RLA _____
Fan FLA _____

Unit Minimum Circuit Amps _____
Maximum Fuse Amps _____

→ FACTORY-INSTALLED OPTIONS

Return Air Configurations

50VQA,VQD080-240:

- ☐ Rear Return, Top Discharge
- ☐ Rear Return, Front Discharge
- ☐ Front Return, Top Discharge
- ☐ Front Return, Rear Discharge

50VQA,VQD300:

- ☐ Rear Return, Top Discharge
- ☐ Front Return, Top Discharge

☐ Deluxe D Controls (with 75 va Transformer)
☐ Cupronickel Heat Exchanger
☐ Sound Attenuation Package
☐ Extended Range Operation

Blower Options:

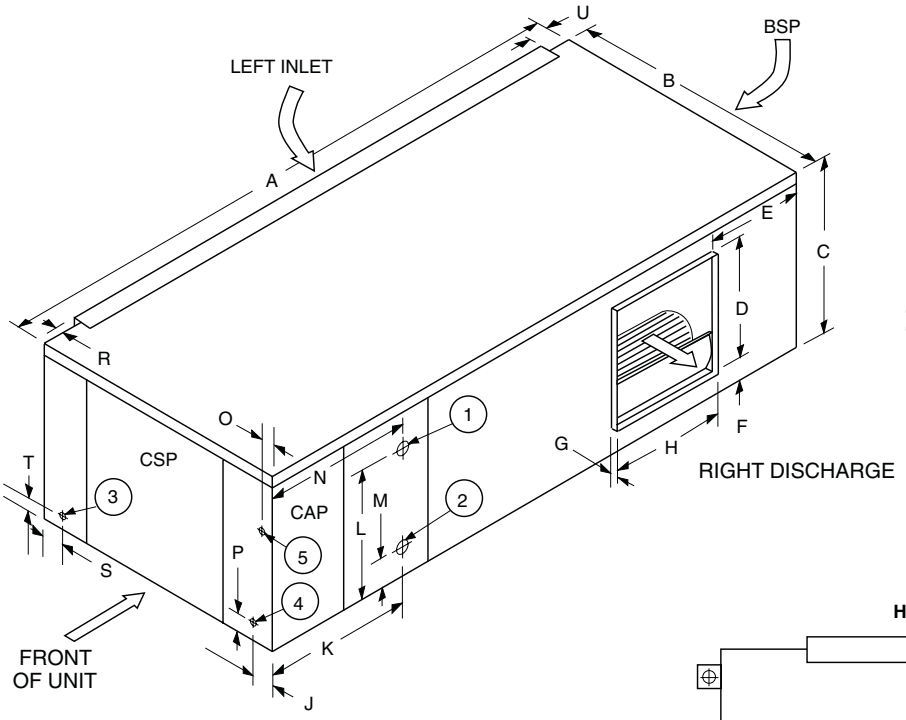
☐ Low RPM/Standard Motor
☐ High RPM/Standard Motor
☐ Standard RPM/Large Motor
☐ High RPM/Large Motor (not available for 50HQL072 or 50VQA,VQD Units)

FIELD-INSTALLED ACCESSORIES

☐ Supply/Return Hose kit
☐ Ball Valves
☐ Two-in. Filter Rack
☐ Solenoid Valves
☐ Aquazone™ Thermostats
☐ _____
☐ _____
☐ _____

DIMENSION PRINT

50HQL072



CONNECTIONS

① Water Outlet	$1^1/_4$″ FPT
② Water Inlet	$1^1/_4$″ FPT
③ Condensate Drain	$^3/_4$″ FPT
④ High Voltage Access	$1^3/_8$″ K.O.
⑤ Low Voltage Access	$^1/_2$″ DIA.

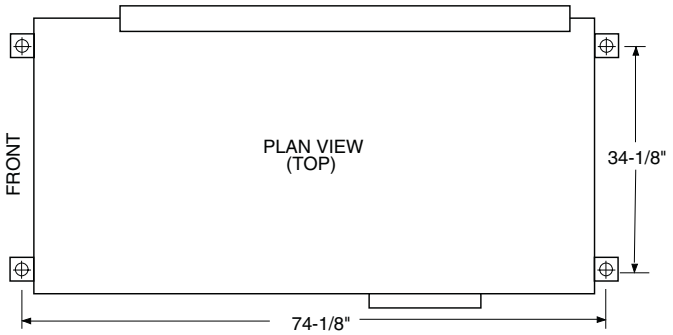
LEGEND

BSP — Blower Service Panel
CAP — Control Access Panel
CSP — Compressor Service Panel

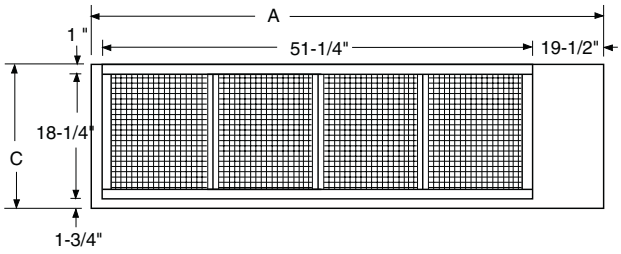
NOTES:

1. Return Air Duct Size: $18^1/_4$″ High x $51^1/_4$″ Wide.
2. Nominal Filter Size: 20″ x $26^1/_2$″ x 1″, Two Required.
3. Leave one end of the duct collar open for filter removal.
4. All side panels are removable.
5. Available in left return and right discharge only as shown.
6. CSP and BSP require 24 in. for access.

Hanger Bracket Dimensions



FLANGED FILTER RACK
VIEW AT INLET



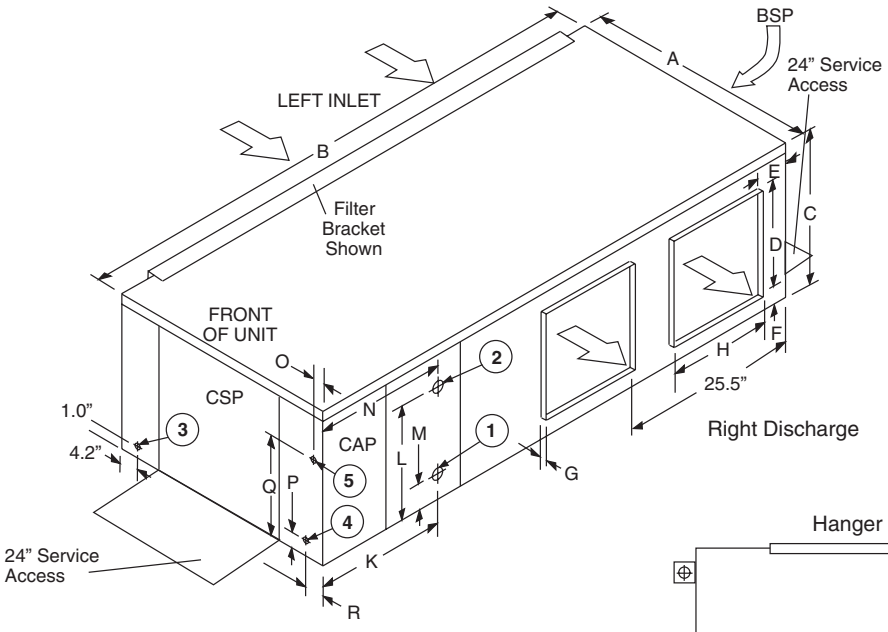
UNIT 50HQL		DIMENSIONS																		
		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
072	in.	$72^1/_4$	36	21	16	$14^1/_2$	3	1	16	$1^7/_8$	$19^3/_4$	$16^1/_2$	$3^1/_4$	$21^1/_4$	$^1/_2$	$2^1/_2$	1	$4^1/_4$	$1^3/_8$	$^3/_4$

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

DIMENSION PRINT

50HQL096, 120



CONNECTIONS

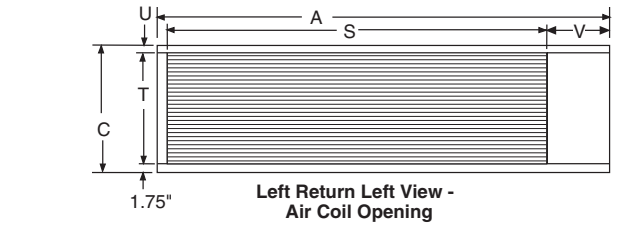
① Water Outlet	$1^1/_4$″ FPT
② Water Inlet	$1^1/_4$″ FPT
③ Condensate Drain	$^3/_4$″ FPT
④ High Voltage Access	$1^3/_8$″ K.O.
⑤ Low Voltage Access	$^1/_2$″ DIA.

LEGEND

BSP — Blower Service Panel
CAP — Control Access Panel
CSP — Compressor Service Panel

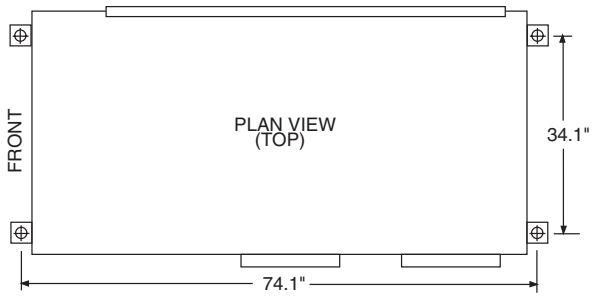
NOTES:

1. All Dimensions in inches.
2. Flanged filter bracket shipped with unit. Leave one end of duct collar open for filter removal.
3. All side panels are removable.
4. Available in left return, right discharge only.
5. Condensate is $^3/_4$″ FPT copper.
6. Horizontal unit shipped with filter bracket only. This bracket should be removed for return duct connection.



Left Return Left View - Air Coil Opening

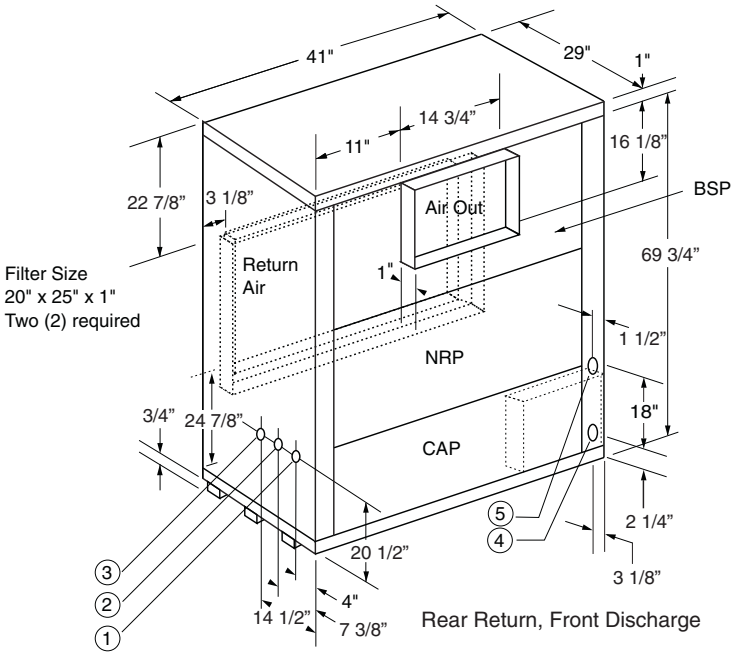
Hanger Bracket Dimensions

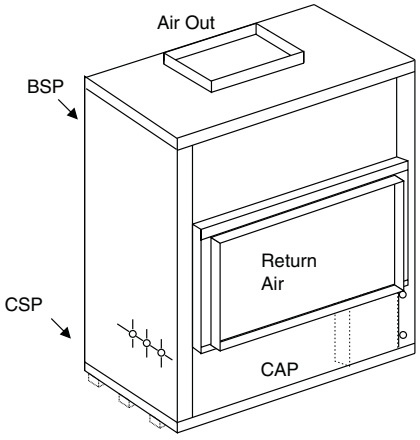


UNIT 50HQL	OVERALL CABINET (in.)			DISCHARGE CONNECTIONS (in.) (Duct Flange [± 0.10 in.])					WATER CONNECTIONS (in.)				ELECTRICAL KNOCKOUTS (in.)				RETURN AIR CONNECTIONS (in.) (Using Return Air Opening)			
	A Width	B Depth	C Height	D Supply Height	E	F	G	H Supply Depth	K	L	M	N	O	P	Q	R	S Return Depth	T Return Height	U	V
096	36.3	72.3	21.0	15.2	3.3	3.3	1.0	15.2	20.2	18.0	3.3	21.9	0.5	2.5	10.0	2.0	62.8	18.8	1.1	7.4
120	36.3	72.3	21.0	15.2	2.6	4.3	1.0	15.2	18.4	18.6	3.3	21.9	0.5	2.5	10.0	2.0	62.8	18.8	1.1	7.4

DIMENSION PRINT

50VQA,VQD080





Front Return, Top Discharge

CONNECTIONS

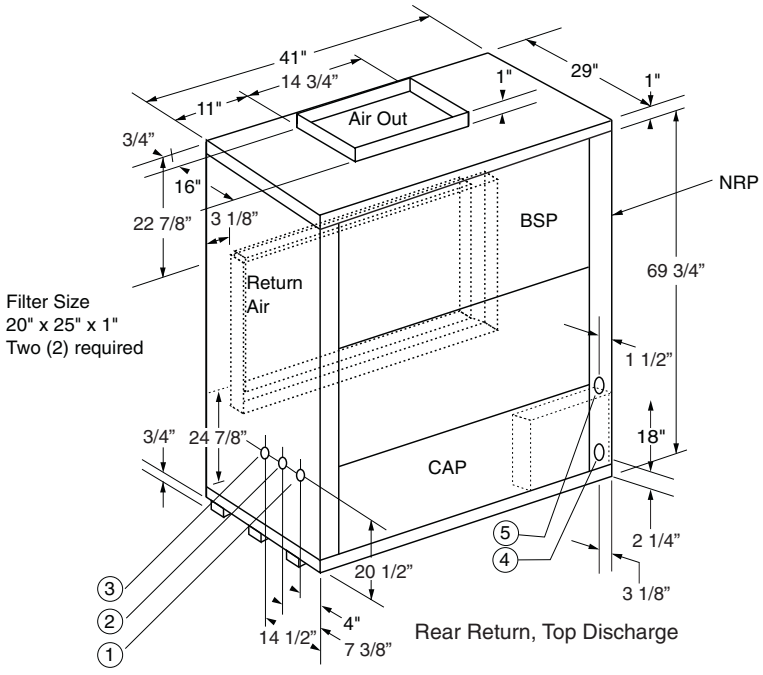
① Water Outlet	$1^1/_4$″ FPT
② Water Inlet	$1^1/_4$″ FPT
③ Condensate Drain	1″ FPT
④ High Voltage Access	$1^3/_8$–$1^3/_4$″ K.O.
⑤ Low Voltage Access	$^1/_2$″ DIA.

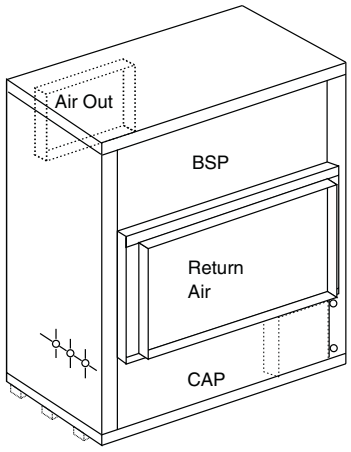
LEGEND

BSP — Blower Service Panel
CAP — Control Access Panel
CSP — Compressor Service Panel
NRP — Non-Removable Panel

NOTES:

1. Units require 3′ clearance for water connections, CAP, CSP and BSP service access.
2. All side panels are removable except those identified by NRP (Non-Removable Panel).
3. Return Air Duct Connection 23″ x $34^3/_4$″.





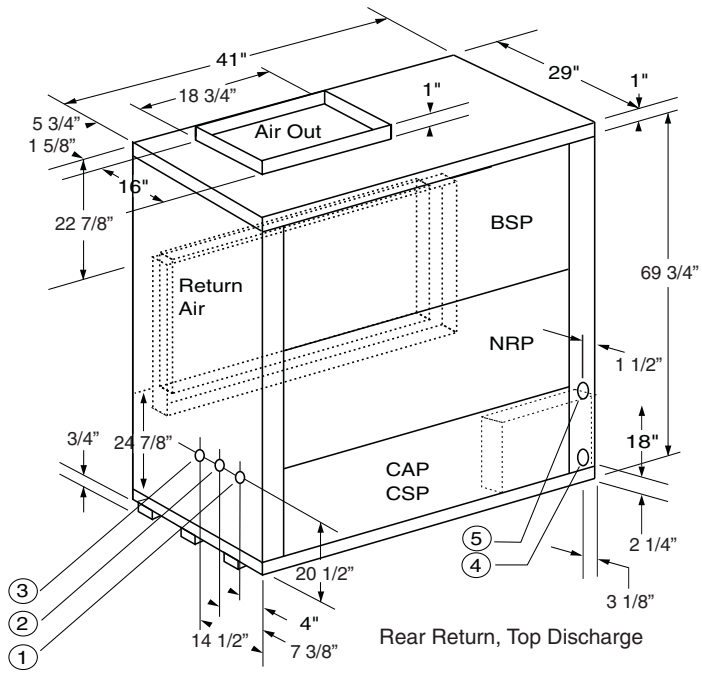
Front Return, Rear Discharge

CUT ALONG DOTTED LINE

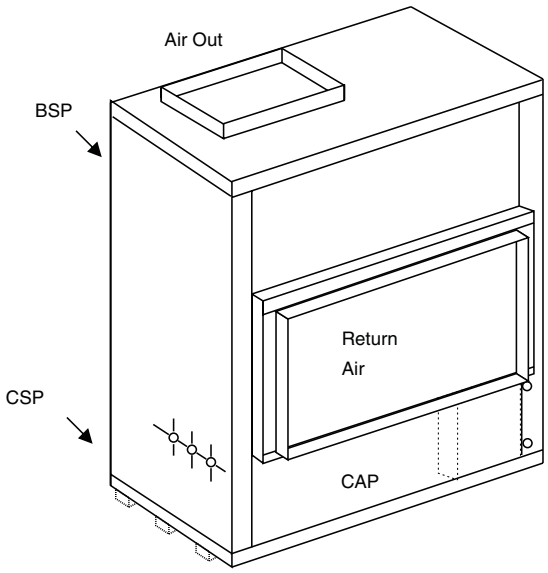
CUT ALONG DOTTED LINE

DIMENSION PRINT

50VQA,VQD100, 120



Rear Return, Top Discharge



Front Return, Top Discharge

CONNECTIONS

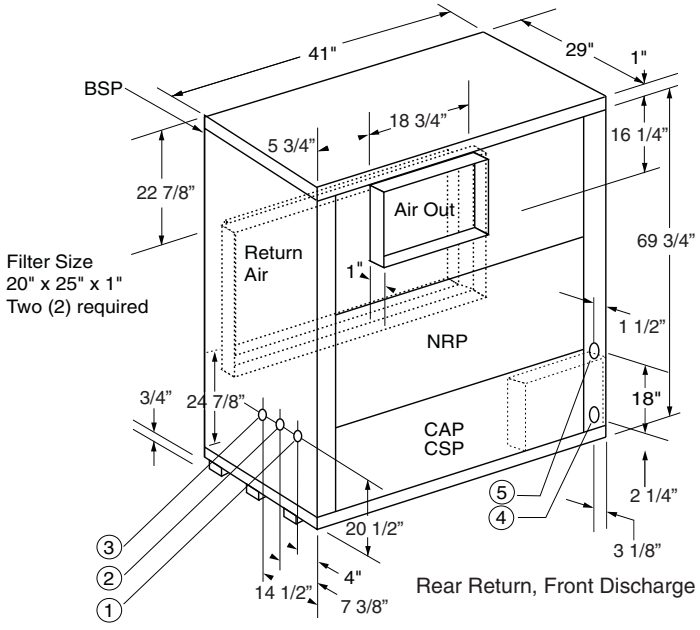
① Water Outlet	$1^{1}/_{4}$″ FPT
② Water Inlet	$1^{1}/_{4}$″ FPT
③ Condensate Drain	1″ FPT
④ High Voltage Access	$1^{3}/_{8}$″–$1^{3}/_{4}$″ K.O.
⑤ Low Voltage Access	$^{1}/_{2}$″ DIA.

LEGEND

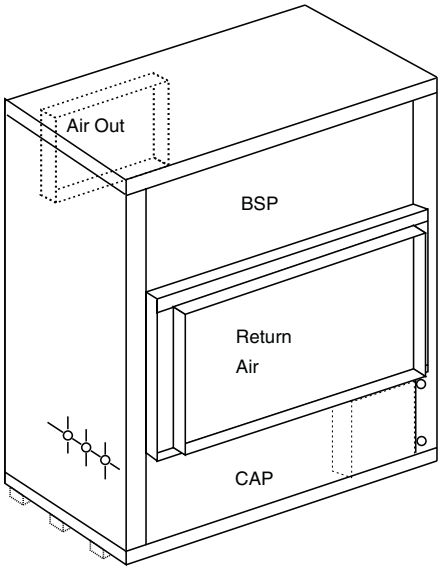
BSP — Blower Service Panel
CAP — Control Access Panel
CSP — Compressor Service Panel
NRP — Non-Removable Panel

NOTES:

1. Units require 3′ clearance for water connections, CAP, CSP and BSP service access.
2. All side panels are removable except those identified by NRP (Non-Removable Panel).
3. Return Air Duct Connection 23″ x $34^{3}/_{4}$″.



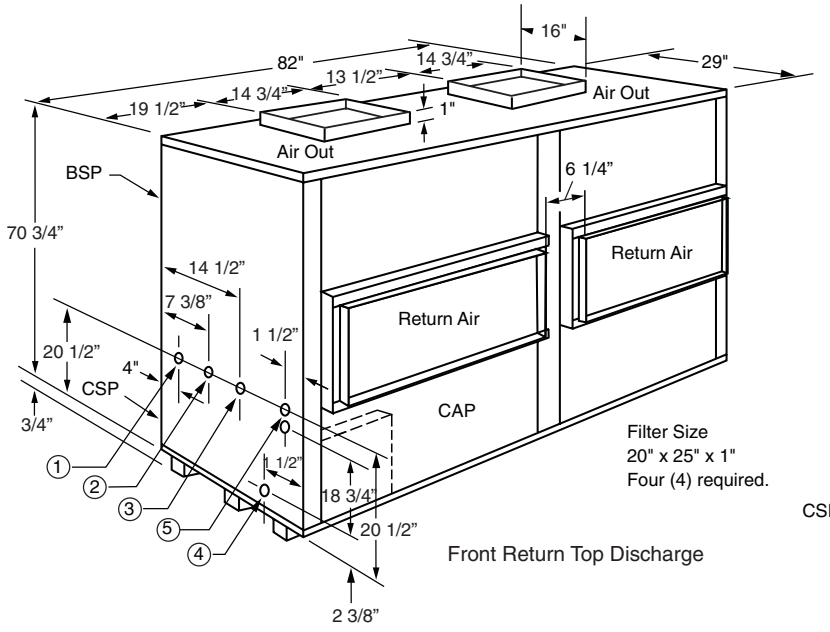
Rear Return, Front Discharge



Front Return, Rear Discharge

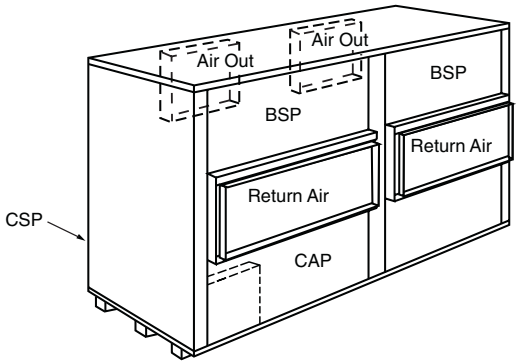
DIMENSION PRINT

50VQA,VQD160



Front Return Top Discharge

Filter Size
20" x 25" x 1"
Four (4) required.



Front Return Rear Discharge

CONNECTIONS

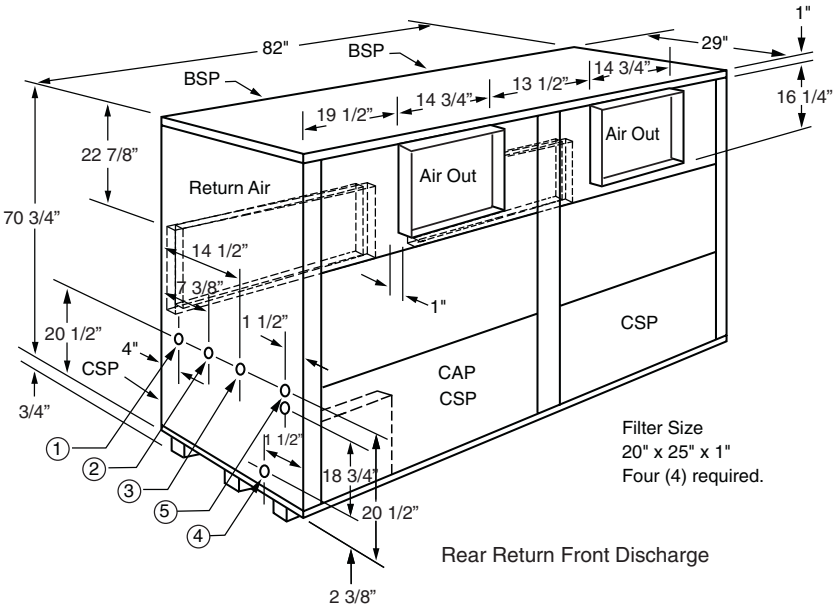
① Water Outlet	$1^1/_2$″ FPT
② Water Inlet	$1^1/_2$″ FPT
③ Condensate Drain	1″ FPT
④ High Voltage Access	$1^3/_8$″–$1^3/_4$″ K.O.
⑤ Low Voltage Access	$^1/_2$″ DIA.

LEGEND

BSP — Blower Service Panel
CAP — Control Access Panel
CSP — Compressor Service Panel

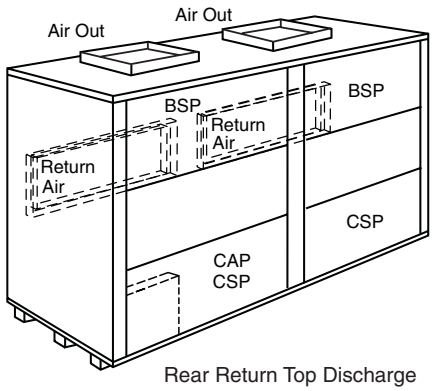
NOTES:

1. All side panels are removable.
2. Return Air Duct Connection (2) 23″ x $34^3/_4$″.
3. Units require 3′ clearance for water connections, CAP, CSP and BSP service access.



Rear Return Front Discharge

Filter Size
20" x 25" x 1"
Four (4) required.



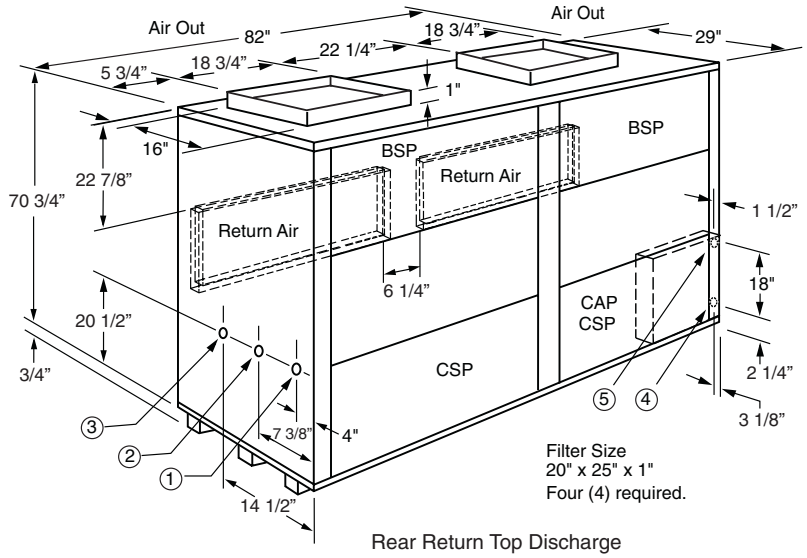
Rear Return Top Discharge

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

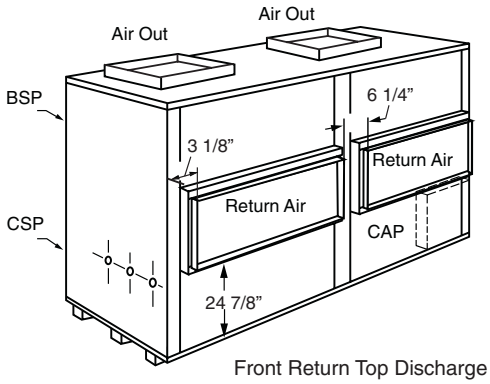
DIMENSION PRINT

50VQA,VQD200, 240



Filter Size
20" x 25" x 1"
Four (4) required.

Rear Return Top Discharge



Front Return Top Discharge

CONNECTIONS

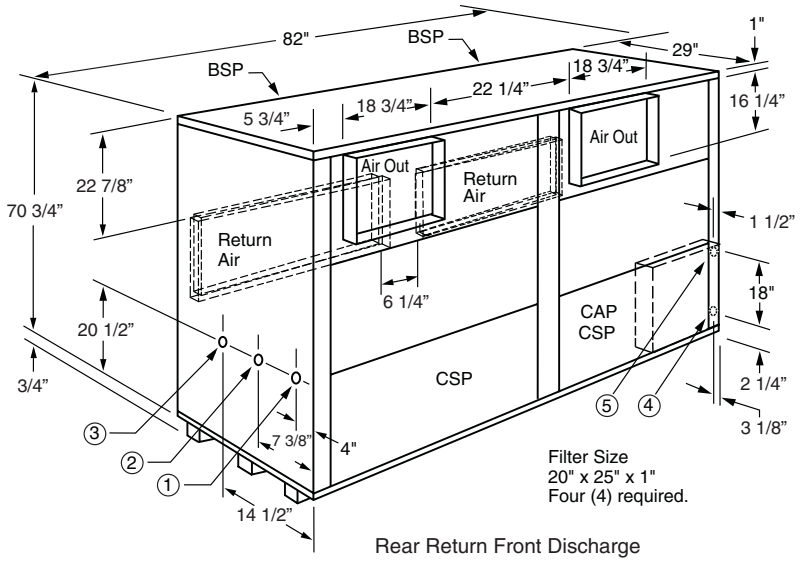
① Water Outlet	$1^1/_2$″ FPT
② Water Inlet	$1^1/_2$″ FPT
③ Condensate Drain	1″ FPT
④ High Voltage Access	$1^3/_8$″–$1^3/_4$″ K.O.
⑤ Low Voltage Access	$^1/_2$″ DIA.

LEGEND

BSP — Blower Service Panel
CAP — Control Access Panel
CSP — Compressor Service Panel

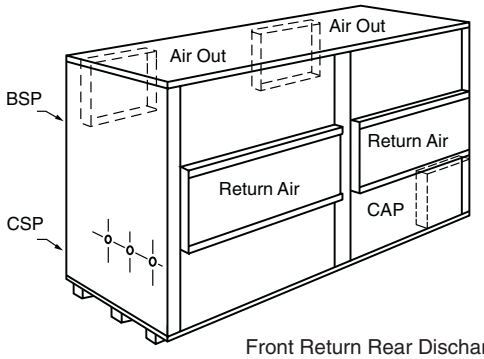
NOTES:

1. All side panels are removable.
2. Return Air Duct Connection (2) 23″ x $34^3/_4$″.
3. Units require 3′ clearance for water connections, CAP, CSP and BSP service access.



Filter Size
20" x 25" x 1"
Four (4) required.

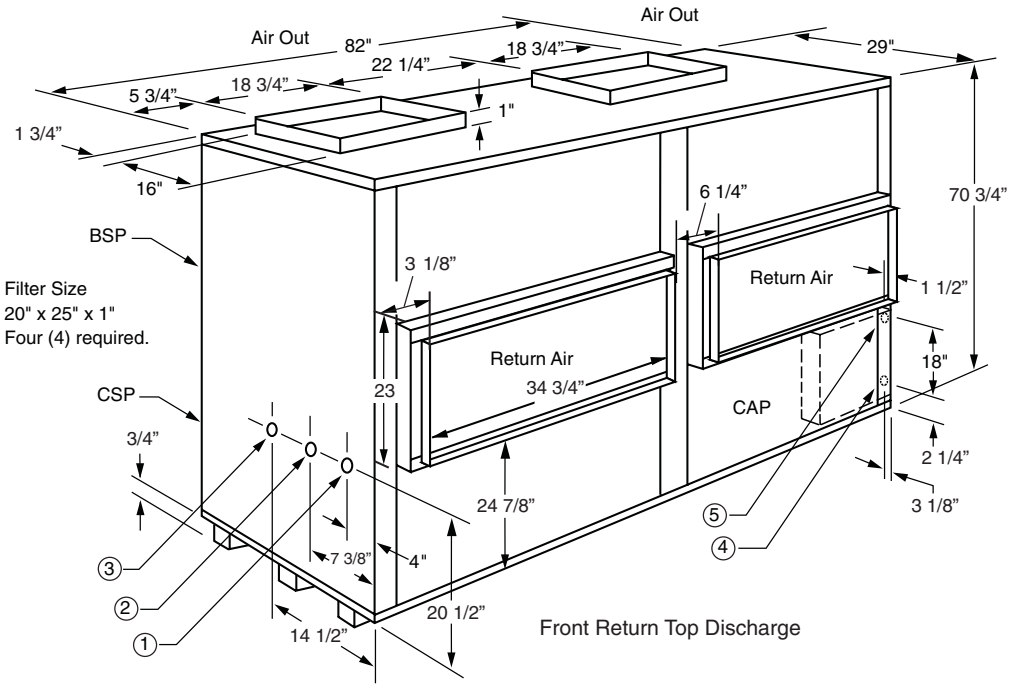
Rear Return Front Discharge



Front Return Rear Discharge

DIMENSION PRINT

50VQA,VQD300



CONNECTIONS

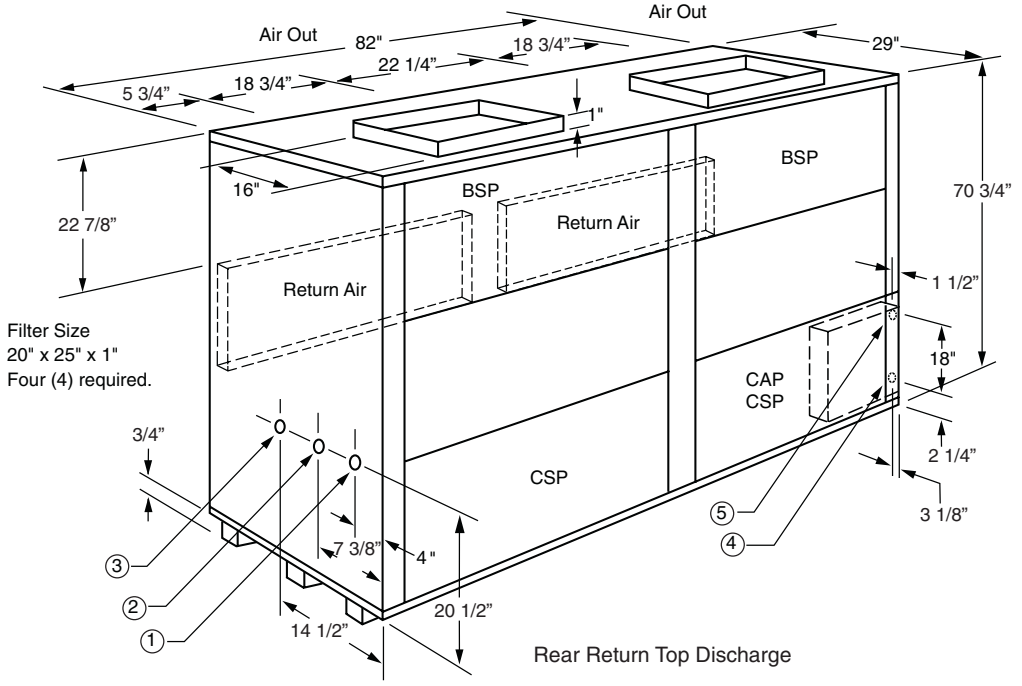
① Water Outlet	$1^1/_2$″ FPT
② Water Inlet	$1^1/_2$″ FPT
③ Condensate Drain	1″ FPT
④ High Voltage Access	$1^3/_8$″–$1^3/_4$″ K.O.
⑤ Low Voltage Access	$^1/_2$″ DIA.

LEGEND

BSP — Blower Service Panel
CAP — Control Access Panel
CSP — Compressor Service Panel

NOTES:

1. All side panels are removable.
2. Return Air Duct Connection (2) 23″ x $34^3/_4$″.
3. Units require 3′ clearance for water connections, CAP, CSP and BSP service access.



DO NOT USE HIGH EFFICIENCY FILTERS